

REMARKS

Claims 1-33 are pending in the application. Applicants amend claims 1, 4, and 32-33 for further clarification, and refer to Fig. 15 and its corresponding description—including page 30, line 20 to page 31, line 26—in the specification for an exemplary embodiment of and support for the claimed invention. No new matter has been added.

Applicants respectfully request that the Examiner consider the Information Disclosure Statement (“IDS”) that was filed on September 21, 2007 for this application.

Claims 1, 4, and 32-33 stand provisionally rejected under nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of co-pending Fujitsu Limited Application No. 10/754,815 in view of “Adaptive Beamforming of ESPAR Antenna Based on Steepest Gradient Algorithm” by Cheng et al.

Applicants submit herewith a terminal disclaimer to obviate this rejection.

Claims 1-12 and 32-33 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Cheng et al. in view of “Performance and Configuration of M-CMA (Modified Constant Modulus Algorithm) Adaptive Array Using Polyphase Filters” by Denno et al.; claims 13-31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. in view of Denno et al., and further in view of U.S. Patent No. 6,369,758 to Zhang. Applicants amend claims 1, 4, and 32-33 in a good faith effort to further clarify the invention as distinguished from the cited references, and respectfully traverse the rejection.

Even assuming, arguendo, that it would have been obvious to one skilled in the art at the time the claimed invention was made to combine Cheng et al. and Denno et al., such a combination would still have, at least, failed to disclose or suggest selecting one of a plurality of array antenna parts forming diversity branches that outputs a largest signal level or a highest signal quality, and adjusting the weighting coefficients with respect to the selected branch.

In other words, even assuming, arguendo, that it would have been obvious to one skilled in the art at the time the claimed invention was made to combine Cheng et al. and Denno et al., such a combination would still have failed to disclose or suggest,

“[a] method of controlling a plurality of array antenna parts forming diversity branches, each array antenna part having a plurality of antenna elements arranged at a predetermined interval, comprising:
selecting a branch outputting a largest signal level or a highest signal quality;
obtaining a predetermined evaluation function with respect to each of weighting coefficients to be applied to incoming signals arriving at a plurality of antenna elements of the selected branch, by perturbing each of the weighting coefficients at a sampling interval which is within one symbol time; and
adjusting, with respect to the selected branch, each of the weighting coefficients based on the evaluation function,” as recited in claim 1. (Emphasis added)

Accordingly, Applicants respectfully submit that claim 1, together with claims 2-3 dependent therefrom, is patentable over Cheng et al. and Denno et al., separately and in combination, for at least the foregoing reasons. Claims 4 and 32-33 incorporate features that correspond to those of claim 1 cited above, and are, together with claims 5-12 dependent from claim 4, patentable over the cited references for at least the same reasons. The Examiner cited and relied upon Zhang as a combining reference to specifically address the additional features recited in dependent claims 13-31. As such, the further addition of this reference would still have failed to cure the above-described deficiencies of Cheng et al. and Denno et al., even assuming, arguendo, that such an addition would have been obvious to one skilled in the art at the time the claimed invention was made. Accordingly, Applicants respectfully submit that claims 13-31, which depend from claim 4, are patentable over the cited references for at least the foregoing reasons.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should

consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,

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